



DEVOTED TO

AGRICULTURE, HORTICULTURE, AND RURAL AND DOMESTIC ECONOMY.

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H. HURLBUT, EDITOR.

[For Terms see last page.]

THE SEASON AND CROPS.—Since our last, the weather has been of the most favorable character for growing crops. The quantity of rain in the latter part of April, and early part of May, caused even too thrifty a growth of wheat, so that some early sown fields on rich soils became lodged, and a few moulded. The drier weather since has caused it for the most part, to straighten up, so that it is hoped no serious amount of injury has been sustained. On the whole the prospect of the wheat crop continues to be very encouraging.—The season has been very favorable also to grasses and spring crops. Fruit has received no serious injury from frosts; more peaches were found to have survived the winter than was supposed, while of apples and plums, there is promise of great abundance.

CROPS IN NEW YORK.—Considerable damage, it is said, has been done to the wheat crop in several parts of New York, by a small white worm which gnaws the stem just above the root. Many fields are turned yellow by the injury thus inflicted, and considerable apprehension is felt by the farmers.

THE VIRGINIA WHEAT CROP.—We regret to learn, says the Richmond Whig, that the wheat fields along the valley of James River, present a very unpromising aspect. The season has been very unpropitious, and the ravages of the fly are said to be unprecedentedly destructive. On the highlands the prospect is even more gloomy.—An unusually short crop in that extensive and productive wheat region is believed to be inevitable.

LUCERN.—We have been at the pains to procure a few pounds of the seed of this much talked of plant, in order to test its adaptation to our soil

and climate. Most of the seed was committed to the hands of a native Frenchman, a farmer of this county, who was familiar with its cultivation in France, and will be likely to give it a fair trial. Should it prove successful, it will be likely to be most beneficial for early feed. For later use, it appears not improbable that Indian corn sown broadcast will be found not inferior to any other plant for soiling purposes.

A TREATISE ON MILK COWS.—Whereby the quality and quantity of milk which any cow will give may be accurately determined by observing natural marks or external indications alone; the length of time she will continue to give milk &c., by M. Francis Guenon, of Libourne, France. With introductory remarks on the cow and the dairy, by John S. Skinner, Editor of the Farmers' Library. Published by Greeley & McElrath, New York, 1846.

The above work, besides the famous Treatise of M. Guenon, contains much valuable information relative to different breeds of cows, their characteristic qualities &c. It is a large octavo pamphlet, handsomely printed and illustrated with numerous engravings. It may be procured at the Book-store of A. McLaren, Detroit, or from the publishers by mail. Price, 37½ cents per copy, or 3 copies for \$1.

FINGER BLIGHT.—Two remedies have been suggested to cure this disease. One, signing himself "INSECT," recommends liberality on the part of the owners of fruit as an antidote. Another thinks that, in the case of melons, a little tartar emetic, inserted with a goose quill into a few of the finest in an infested patch, would be a sure protection to the rest; for he avers that when so treated the insects are found to have a decided aversion to a second visit.

ALBANY AGRICULTURAL WAREROOM.—We would invite the attention of all persons wishing to procure Agricultural implements and seeds not to be found in our State, to the advertisement of E. Comstock, & Co., on our last page.

For the Michigan Farmer.

The Commentator, No. 1.

APRIL NUMBER.

"DICTIONARY OF TERMS USED IN AGRICULTURE." The insertion of this article I conceive to be what was needed; for, as you observe, however plain and practical a work may be, to express ourselves pertinently, the use of these terms is more or less necessary. But the unnecessary use of *learned phrases*, or what I term *quackery* in language, is what I detest, and I am always sorry to see sound common-sense men running into such *dandyism* in language,—to wit, *modus operandi*, *lusus naturae*, &c. &c. Is it because our language is defective, and is not full enough to express our ideas? or does it give more force and weight to our expressions to clothe them in words borrowed from a language out of use a thousand years ago?

"DEPTH OF PLOWING" is a subject of much importance to the farmer. I am well aware that too shallow plowing is almost universally practiced in Michigan. Be the subsoil what it may, a certain depth of plowing is necessary to prevent vegetation growing upon it from parching up by our hot summer suns. On our oak opening land, the soil of which is principally sand and gravel, I have found by experience that a deeper mode of plowing than is usually practiced is highly necessary. I found during the severe drought of last season, that there was a marked difference in favor of land where it was deeply plowed. The corn leaves standing on the one fresh and vigorous, while on the shallow plowed, the leaves were rolled and almost killed. I find "Smith's Subsoil Plow" an excellent article for deepening the soil.

The article from "A DAIRY-WOMAN of Herkimer,"¹ is a valuable article to the inexperienced in cheese making, and is very applicable to our small dairies of the West. As she truly remarks, temperature is important to be observed in cheese making, and the dairy-woman should be provided with a thermometer at hand, and not trust to "guessing."

I hope many of your subscribers will test the utility of the practice of soaking seeds, and give the result of their experiments to the public through the medium of your paper. If the result, as given in the articles taken from the Farmer's Library and American Gardener, should be found to be uniform and general, it will be of immense importance to the farmer.

On the subject of "Breaking-up," Mr. Tower seems to have arrived at a very correct conclusion, that June is the best month in the year for breaking up sword land, and that neither later nor earlier is as good. To the truth of this I can testify from my own experience in repeated instances.

"CURING SHEEP OF THE SCAB." On this subject I have just taken a pretty thorough practical lesson, and have come to the conclusion that nothing is effectual as a cure, except it work through the whole system in the blood. There are many things which, if they can be so applied as to reach the insect which causes the disease, will effect a cure. But the difficulty is in thus thoroughly applying it, especially if the sheep have long wool at the time. Again, if the sheep

have long been affected, there will be found incrustations of scab so hard, that the liquid recommended by "A Caledonian" will not penetrate, even if the sheep be immersed therein. Having about 100 sheep badly diseased, I made repeated application of that medicine, and others of a similar nature, but with no other success than to check the disease, *not cure it*, until I became discouraged of ever effecting a cure, and would gladly have sold them at half price, when I read and tried the medicine recommended in the Cultivator, Vol. 2, No. 2, page 49, viz: 1 lb. pure quicksilver, venice turpentine and common oil*, each 1-2 lb., and 4 lbs. hog's lard, thoroughly mixed together; applied on the back, and rubbed thoroughly in the large veins of the neck. In two weeks time they were well, and I have seen nothing of it since. The amount of the ingredients above named will be sufficient for 100 sheep.

One remark more on the suggestions of Mr. Russell, in relation to raising Millet on summer fallow. That Millet is an excellent kind of fodder for cattle or horses, there is no doubt; but I would recommend no one to depend upon raising it as a general thing for his stock instead of hay, for I am well convinced it is the most injurious crop that can be put on land, and I am farther satisfied that any one who will try it on his summer fallow will find it a great mistake to think "it will not injure the wheat crop."

I have made several trials in raising millet in different ways, and found the result as affecting the land nearly the same, leaving it sour and heavy, and excellent to precede a crop of sorrel, and for nothing else.

I tried at first, as recommended by Mr. Russell, sowing and cutting a crop for hay on my summer fallow, but found a marked inferiority in the wheat growing upon it to that growing on the naked fallow. Thinking I was robbing the land by taking so much from it, I thought I would try turning a crop under as a green manure. This I did two successive years, turning under an immense growth of it at each time, in August, and sowing wheat directly after. I found the wheat to be no better, and I thought not as good as that growing on the naked fallow. Still I could not give up that it was not a benefit to the land. But, after cropping the ground for two or three years since, I find it less productive than other parts of the farm, and while other parts are nearly free from sorrel, that on which millet has been grown is nearly covered.

The two best crops to precede wheat the same season, are peas and barley; but for the benefit of the wheat crop alone, I prefer the naked summer fallow.

Although our "opening" land is not what is generally termed grass land, yet by the use of plaster and clover I can get as good a burthen as any other kind of land will produce, and less likely to be affected by the extremes of wet and dry than a clay soil.

J. F. C.

Kent Co., Mich.

* Lamp oil is as good as any.

We thank our correspondent for his strictures, and request their continuance. We would wish every thing we publish to be judged by the light

of experience ; and would request all, whenever any suggestion is made which is contradicted by well-ascertained fact, to give the public the benefit of the correction.

With regard to the plan of sowing millet for hay on a summer fallow, we considered it important only as a temporary expedient, when meadows of the artificial grasses are not yet obtained, or to serve as a change of feed, where the farmer chooses to have meadows of clover only. We were not aware of its producing such exhausting effects upon the soil. Quere, may not some of the injury have been caused by the seed of sorrel, sown with the millet ?

Ed.

Culture and Use of Lucern.

FRIEND BATZHAM :—Your correspondent C. W. of Licking co., asks information respecting the culture of Lucerne. He is welcome to the following :

Lucerne (*Medicago Sativa*) should be sown early in the Spring, on rich sandy soil, either broadcast, or in drills a foot asunder ; (the latter method is decidedly preferable, as it permits the use of a heavy drag to loosen the soil between the rows once or twice in a season;) and from 12 to 15 lbs. of seed per acre, is then sufficient.— As soon as it reaches a foot in height, it may be mown, and again every month or six weeks thro' the summer. It is much better adapted for feeding when fresh cut or *soiling*, than for winter fodder. It is quite as much benefitted by the application of plaster, lime, or ashes, as common clover ; also by top dressing of manure ; and it will produce about twice as much herbage as red clover treated in the same manner, but it does not answer equally well for fattening. Near cities, for dairymen or tavern-keepers, this crop is almost invaluable ; and, indeed for any one who has the right kind of soil, and economy enough to resort to the soiling process. Around Paris, and other cities in France, Lucerne is the main dependence. Nearly five years since, I sowed in this country, a small quantity of Lucerne, on a sandy soil ; the plants continue to thrive luxuriantly, and though subjected to all sorts of hard usage, for neither animals nor fowls show it any mercy, it was last summer as fine as ever. The roots will continue vigorous about 10 years ; but it is more profitable if renewed once in six or seven. Lucerne is no humbug.

Yours, &c.

NORTON S. TOWNSEND.

Elyria, O., 1846.

REMARKS.—In addition to the foregoing, we would mention that a farmer near Columbus, Mr. Welles, sowed a small quantity of Lucerne 4 or 5 years ago, by way of experiment, and it has succeeded admirably, though not as well as he thinks it would if his land was more sandy. He brought a single root into our office a few days ago, which was over two feet in length, and from its size where broken off, at the bottom, we should judge that one third of its length was left in the ground. The top part was as large as a good sized parsnip. It branched off at the surface into numerous crowns or heads.

The subscriber who inquires whether lucerne and lucerne grass are the same, is informed there is only one article called lucerne, and that is more a clover than grass, though not strictly either.— Ed. O. CULT.

Culture of Corn while growing.

The first object should be to keep the ground light, and the crop clear from weeds. On light soils, the harrow and cultivator may accomplish this without much aid from the hoe ; but operations must be commenced with one of these implements, (the harrow is perhaps preferable at first,) as soon as the corn appears above ground ; and so frequently should the work be repeated as to allow no time for the weeds to start.

On soils which have a tendency to become too compact, tools must be used which will penetrate the ground to a considerable depth. It is the class of soils which bake under the action of the sun, that suffer most from drouth, and the crop can in no way be so well protected against injury from this cause, as by frequent stirring and loosening the soil, by which the tendency to become too solid is counteracted. An implement with teeth like a plow coulter, two or three in a frame, answers this purpose well. While the corn is small, it may be run very close to the stalks without injury, but as the size of the plant increases, and the roots extend, the implement must not run so near. In some sections, what is called a shovel plow is used, and when properly made, it is an excellent tool. The wings of the share should not be too widely spread, as this throws the ground too much into ridges ; it should be calculated to cut or stir the ground without moving it much to the right or left. A good plow of this kind loosens the soil much more effectually than a common plow, leaves it lighter and not thrown into ridges. Besides the objection of too much ridging the ground, the common plow leaves the substratum even heavier than it was before, instead of making it loose and light.

For any ground on which it is proper to raise Indian corn, level cultivation is decidedly preferred. It exposes less surface to be dried by the sun and air, more readily receives and retains moisture, permits the extension of the roots over the whole soil by which the plant is better nourished, and better strengthened against the force of winds. When ground is thrown into sharp ridges, as is done by the plow, many of the horizontal roots are scorched by the sun, and are necessarily so short as to afford the plant but little support as braces.

In cultivating sward, the soil ought not to be turned up the first season. The tools mentioned will sufficiently loosen the soil without bringing the grass to the surface, and the gases evolved by decomposition are not wasted in the air, but are taken up by the growing crop.

In the early stages of the growth of the crop, the soil can hardly be tilled too much. To keep down the weeds, which should be the primary object, some of the implements of culture should be often passed through the soil, till the crop becomes so large as to obtain full possession of the ground.

—Cult.

Indian Corn for Soiling and Fodder.

We doubt whether the value of Indian corn is more than half known, yet, among the generality of farmers; and if the unparalleled drought throughout the country last summer should have a tendency to teach it to them, the terrible lesson may be looked upon as a mercy rather than a great scourge, from a benevolent Providence.

During the past eight months, thousands of animals have perished or been sacrificed for the want of grass or fodder to sustain them, all of which might have been saved and kept in good condition, had each farmer sowed a few acres of corn for soiling and fodder. We saw, last summer, on a light sandy soil, a crop of corn growing which turned out six tons of excellent dry fodder per acre. It was sown on the first day of July, in drills three feet apart. The land was plowed deep, and lightly manured. This crop was the means of saving a superior herd of cows from starvation. Henceforth, however promising the grass and hay crop may be, let no farmer depend entirely upon it, but let him sow a few acres of corn for soiling, to be cured for winter use.—He will then be tolerably independent of a capricious season. If the land be rich and properly prepared for corn, it will be sure to come up and grow however dry it may be, provided the seed be prepared by steeping it in guano or saltpetre water, or some other cheap solution. When corn is tolerably advanced in its growth, it completely shades the ground, and the drought will have but little effect upon it.

A larger crop may usually be grown in drills than when sown broadcast; and if these drills be about two or two and a half feet apart, we believe it will be found better than nearer, especially in a very dry season, as the cultivator can be often run between the rows, stirring the ground effectually, and neutralizing, in a measure, the effects of dry weather.

We recommend sowing at least one acre of corn for fodder, for every five head of cattle kept on the farm. If there be an overplus of hay it is very easily disposed of.

From the British American Cultivator.

Turnep Culture.

The chief feature of the improved English system of agriculture, may be said to be the cultivation of Turneps for the rearing and fattening of cattle. The following description contains a minute account of the Northumbrian system by which manual labor is almost dispensed with:—

The land having been prepared by as many ploughings and harrowings as may be thought requisite to pulverize it and destroy the weeds and laid quite flat; an experienced ploughman draws as straight a furrow as possible, and returning lays the next furrow slice upon the first, thus completing a *bout*. The usual width of the furrow being 9 inches, the first ridge and furrow take up 18 inches, the next furrow slice being laid over the first, the whole work takes a width of 27 inches. He then enters again at the distance of 27 inches from the land side of the first made furrow, and completes a second bout parallel to the first. When the whole piece or field is thus laid into narrow ridges, the depressions are about 6 inches below the former surface and

the ridges as much above. This at once doubles the depth of the cultivated soil in the ridges. The manure is now brought on the land in small one horse carts, the wheels of which are about 54 inches apart, so that the horse walks in one furrow while the wheels move in the two adjoining. The manure, which is chiefly common farm-yard dung, not too much decomposed, especially if the soil is inclined to clay, is laid in small equidistant heaps in the centre furrow, drawn out of the cart by a dung-drag, and afterwards evenly spread in the middle furrow to the right and left of those. The quantity thus laid on must depend on the supply in the yard, but ought not to be less than 15 or 20 single horse loads per acre. The ploughman now begins to cover this dung by splitting the ridges in two, laying one-half to the left and the other to the right and reversing the bouts, so that the ridges are now directly over the dung, which is completely buried. A roller is now drawn over the ridges to flatten them at top, in order that they may better receive the seed, which should be drilled in as quickly as possible, to take advantage of the moisture of the fresh turned soil. It would be desirable to soak the seed in a strong decoction of tobacco for 12 hours, and dry it previous to sowing with the drill barrow. In light soils another slight rolling is necessary to press in the seed, but ordinarily the roller of the drill-barrow will suffice. It will be obvious that by this method the seed has not only a greater depth of mellow soil to strike in, but the fermentation of the dung, immediately under it, acts as a hot-bed, and soon brings it up; by which means it is generally so rapidly in the rough leaf that it is not likely to suffer from the fly, more especially if the precaution of soaking the seed, with a view to secure that object, has been attended to. As soon as the Turnep has four leaves out of the ground, the rows may be thinned by the hoe and the plants left from 8 to 10 inches apart. The next process is stirring the ground between the rows with a light one horse plough. The plough takes a small shallow furrow to the left of the row within 3 or 4 inches of the young plants, and lays it in the middle of the interval between the ridges. When this has been done on both sides all over the field, there will be small ridges formed between the principal ridges on which the Turneps grow. All weeds are thus buried except between the plants in the rows, where they are taken out by the hoe. Some time afterwards a narrow cultivator with crooked tines is drawn through the furrow to level the small ridges left from ploughing out, and to clear the ground of all remaining weeds. Before the autumn rains set in, or the Turnips have too wide spreading tops, a plough with a double mould board is drawn along the middle of the intervals, and lays half of the soil on each side against the ridge on which the Turneps grow, to supply fresh mellow earth for the extending fibres to strike into. When the Turneps are off, one bout of the plough levels each of the ridges, heavy harrows level the whole, and it can be ploughed in the ordinary way for a spring crop.

(F) A HEAVY FLEECE.—Mr. Henry Daniels has brought to our office a specimen of Merino wool, from a 2 year old buck whose fleece weighs 8½ lbs.

For the Michigan Farmer.

Clearing Timbered Lands.**MR. HURLBUT :**

I notice, in the May number of the Farmer, an inquiry respecting clearing timbered land, and whether girdling the large trees, where the land is not wanted for cultivation for four or five years, would be expedient. I think the project would be objectionable, on some accounts at least. First, forests of that kind would be very dangerous for cattle to run amongst, from their liability to blow down in high winds. In the next place, there would be a much larger growth of underwood at the end of four or five years, and consequently but little saving in chopping; besides, the land would be in as sour and crude a state as ever.

The best method, in my opinion, (and I have seen it practiced with great success,) is, to chop the timber all down when the sap is in full flow, fall in windrows from seven to nine rods apart, (the distance would somewhat depend upon the height of the timber,) or fall in jams, if more convenient. It will need no trimming but to lop some of the most prominent limbs. I would suggest the propriety of leaving the best rail timber until a little before burning, which should be done in about two years. If a dry time is taken to burn, the fire will consume a great part of the timber; then sow on grass seed, and fence. It will produce as much pasture for stock as the best cultivated land, and at the end of four or five years or more, if you please, it can be chopped and logged with comparatively little labor, as the timber becomes very light and tender. In the mean time, the small stumps will be gone, and many of the larger class can be extracted. It can then be plowed without the risk and perplexity of battering shins, and your land will produce abundantly.

One word on the subject of crops. The prospect for wheat, in this region, was never better. Fears are entertained, however, from the rapidity of its growth, it will fall down before heading. Indeed, some spots have already, and if the weather should continue wet and warm, it is more than probable it will be seriously damaged. Grass gives promise of an abundant crop.

Yours, &c., FRIEND BELDING.
Troy, Oakland Co., May 11th, 1846.

For the Michigan Farmer.

Farm Implements.**MR. EDITOR :**

In your last No. you speak of "Implements that every farmer wants." Permit me to add to the number, and mention some of the difficulties, I have met with in their construction. And first a *corn marker*, to be used where land is free from stumps, one that contains three or four teeth, which shall all mark at the same time where the land is moderately uneven. If a given distance is right for corn rows, it follows that if the rows are crooked, some will be crowded, while others have unnecessary latitude. It is also much easier operating with a cultivator or plow between straight rows. I have practiced plowing diagonally with a shovel-plow, with good success, where the rows are marked at right angles.

The next implement I have to mention is a *hay or grain rigging*—one that shall comprise the following qualities,—holding a large load without upsetting—easy to pitch to and from—convenient to load upon—convenient to load off and on the wagon by a single person—and finally, portable, so that it may be housed without taking much room. This is an implement every farmer should have ready for use, and not be obliged to stop business in haying or harvesting to make one. If you, or any of your correspondents, will furnish a plan for the above implements, one at least of your readers will feel himself obliged.

Wheat never looked better in this immediate vicinity, and the prospect for fruit was never brighter.

RUSTICUS.

Grand Prairie, Kalamazoo Co., May 8, 1846.

 We hope "Rusticus" will furnish us the result of the experiments to which he alludes, whether it be favorable or unfavorable. A failure, which shall show us what to avoid, may be worth nearly as much as success which shall point out the way to follow.

ED.**How to sustain and Improve the quality of the Soil.**

It has become an important inquiry among many of our farmers, how they shall fertilize such of their lands as are yielding large burthens of produce, which are taken off the premises for sale? Where remote from a large city, or places for supplying manures, this is a most important query, and one which they are highly interested in having answered correctly. It is absolutely certain, that farmers cannot annually rob their farms of large crops of grain, grass and roots, without either supplying manure to the soil, or losing rapidly in its fertility. We shall briefly indicate some of the most obvious resources for sustaining and improving the productiveness of the soil.

In the first place, not an ounce of animal manure should be suffered to be wasted, either liquid or solid. When not dropped on the feeding grounds, but around the stables and yards, it should be carefully saved and treasured up, where it cannot waste till used. This should be carefully and judiciously compounded with turf, or peat, or vegetable matter, so as to retain all its gases, and not be permitted to drain away, and as soon as a proper time offers, it should be carried on to the fields and at once incorporated with the soil. Another resource for many of our Eastern farmers, is the immense stores of peat and muck that are within their reach, and which tends greatly to benefiting a light, sandy or loamy soil. All the animal matter, ashes, leached or unleached, should be carefully collected and applied to their land, and any other fertilizing substance which is to be found around the premises or can be collected at not too great an expense in the neighborhood.

But in many cases where the stock of cattle is not large, and the produce sold from the land is considerable, some more definite and certain means for sustaining a farm must be resorted to. With the most intelligent and systematic agriculturists, a proper rotation is adopted, which has

been found by experience, to be adapted to the locality and products. By this is meant, a regular succession of crops on the same field through a series of years, which at their expiration, are again repeated. They are so arranged that two grain crops never follow each other, but are separated by root crops, grass, &c. This system prevents the necessity of the soil yielding similar ingredients through two or more successive seasons, which it will seldom do to an extent sufficient to produce a good second crop. Time is required for it to decompose such of the ingredients which it contains, as are necessary to form what are called the inorganic portions of the plant, in such conditions as to be taken up and appropriated by the plant. It also enables the cultivator to apply his green or putrescent manures to such crops as are most properly adapted to receive them. Such are corn and roots, and nearly all the objects of cultivation excepting the smaller grains.

The great object of rotation, however, is to give the land rest as it is termed, when allowed to remain in grass or meadow; or refreshment when clover or other fertilizing crops are plowed into the soil for manure. Such crops carry back to the soil so much of its materials as they have taken from it, and in addition, important elements which they have abstracted from the atmosphere; and they are found by long practice, to be of great benefit in sustaining the fertility of the soil. Before passing on to a consideration connected with this particular point in the subject, of the highest importance, we would say, that a large share of the benefit to the land, derivable from this practice, may be secured, by feeding the clover to such animals as will consume it on the ground. We say a part only, for all the food which goes to supply the respiration of the animal, which is an inconsiderable share, passes off again into the air, and is lost. Another part is stowed up in the augmented size of the animal, for it is certain that whatever weight it acquires while feeding, is at the expense of the soil. If milch cows are pastured, the abstraction of valuable ingredients is still greater, as it has been found that pastures fed off for a long time by cows, have been robbed of large amounts of phosphate of lime, and other important matter. If horses are thus fed and taken on to the roads or else where to work, it is evident that large quantities of this manure will thus be lost to the fields supplying the food.

Sheep are undoubtedly the best adapted to the object we have in view. They remain stationary in the same fields where they feed, and return to them all they have taken, save what escapes by respiration, evaporation, or is stored up by the wool or carcass. They also drop their manure on the highest and driest parts of the ground, where it is more beneficial than elsewhere; and we would most earnestly recommend the introduction of sheep husbandry on a more or less extended scale, to any farmer who practices the system of turning in crops for manure. The necessity of carrying them through the winter, will still further provide the materials for fertilization, by accumulating a store of manure from this source, which without the sheep or a full equivalent in other stock, would not be thus secured.

But to recur to the subject of turning in green crops. It is evident at a single glance, that this system does not accomplish all that is necessary in sustaining the full measure of fertility of land subject to close cropping. In a rotation consisting of clover and wheat simply, we find that the wheat abstracts large amounts of phosphate of lime, potash, gypsum, salt, &c., &c., which if nothing be added to the soil, except the clover crop, will in a few years reduce any ordinary soil to so low a point, that it cannot yield profitable returns. The land may continue to yield for a long time; but it is evident that it is losing properties at every successive harvest, which must be supplied to it, or it will eventually be exhausted.

The true and only remedy for this, is, to ascertain by analysis, either of your own, or the well established researches of others, precisely what of the inorganic materials, such as are inherent in the soil, and not found to any appreciable extent in the atmosphere, are taken from the land by cropping or feeding, and not returned to it by straw, manure, or osfall of any kind, and return those materials to the land in such available shape as will enable future crops to supply themselves with all they require. This is indispensable to a succession of good crops and prolongs fertility, and no farmer is wise who neglects this practice for a single year, however seemingly well his adopted system may answer, which does not embrace the foregoing practice.—*American Agriculturist.*

A Cheap Paint.

Take one bushel of unslacked lime, and slack it with cold water; when slackened, add to it 20 lbs. of spanish whiting, 17 lbs. of salt, and 12 lbs. of sugar. Strain this mixture through a wire sieve, and it will be fit for use after reducing with cold water. This is intended for the outside of buildings, or where it is exposed to the weather. In order to give a good color, three coats are necessary on brick, and two on wood. It may be laid on with a brush similar to white wash. Each coat must have sufficient time to dry before the next is applied.

For painting inside walls, take as before one bushel of unslacked lime, 3 lbs. of sugar, 5 lbs. salt, and prepare as above, and apply with a brush.

I have used it on brick, and find it well calculated to preserve them—it is far preferable to oil paint. I have also used it on wood, and assure you, that it will last longer on rough siding, than oil paint will on planed siding or boards.

You can make any color you please. If you wish a straw color, use yellow ochre, instead of whiting: for lemon-color, ochre, and chrome yellow; for lead and slate-color, lampblack; for blue, indigo; for green, chrome green. These different kinds of paint will not cost more than one-fourth as much as oil paints, including labor of putting on.—*Emigrant's Hand Book.*

To DESTROY THE BEE MILLER.—To a pint of water, sweetened with honey or sugar, add half a gill of vinegar, and set it in an open vessel on the top or by the side of the hive. When the miller comes in the night, he will fly into the mixture and be drowned.

[Extracts from communications by the Hon. H. L. Ellsworth, ex-Commissioner of the Patent Office, to the present Commissioner.]

The Army-Worm.

A remarkable circumstance occurred in my wheat field, where several varieties were sown. The red-chaff bald wheat was attacked by the army-worm, and the stalks completely stripped. When the worms reached the white flint wheat, obtained of Mr. Harmon, of Wheatland, N. Y., they stopped, and went around the piece without touching a single stalk! The attack did not essentially injure the berry of the bald wheat, on account of the lateness in which it took place.

Prevention of Bloody Murrain.

I cannot omit to mention the important results which have attended my former recommendation of salting cattle and hogs, with a composition of salt, ashes, and clay. You may recollect that I advised to take water saturated with salt and mix it with two parts of dry ashes and one part of dry clay, and when the whole was brought to the consistence of clay mortar, to mould it into a pyramid shape and suffer it to harden, and then put it into the field where stock could lick it at pleasure. This experiment has been fully tested, and herds together, hitherto afflicted with the bloody murrain, have been exempt from any further attack. The clay is not, I suppose, so material. Ashes and salt in equal quantities, mixed, if convenient, with bran, may be given to cattle, horses, sheep, and even hogs, once or even twice a week, with the most happy results. The solid cakes, however, allow the feeble stock to obtain their share; indeed, this plan gives to all as much as they desire, and at the time they desire it. Sheep will usually lick the cake every day.

Smut in Wheat.

In our last Volume, Page 94, is given the method of an experienced wheat grower, in saving his seed wheat, so as to prevent smut. It was to cut when fully ripe, place it by itself on the scaffolding over his barn floor, (not in a mow or stack,) when ready, thrash and sow without any preparation. He is never troubled with smut. That method is published in the Commissioner of Patents' Report, and also the following:

From the Report of the Commissioner of Patents for 1846.

BLOOMFIELD FARM,

New Middletown, Frederic Co., Maryland.

January 8, 1846.

Sir:—According to the promise I made when I last saw you, I now communicate to you the information I have of the growth and production of wheat, corn, rye, &c. I have been experimenting for a number of years, and have discovered that in all diseases of wheat, rye, &c., there is a first cause, unvarying in its effects; and in order to avoid the disease, we must first find out this first cause, and the proper remedy may then be employed.

In order to improve wheat I select a piece of new land with a north-western aspect; and if I

have no new land with such exposure, I take old land lying in the same way and manure it with fresh horse dung, and find it will answer equally as well. You may ask why I select land with this exposure to sow my wheat for seed the next year. The reason is this. In the first place a cold hillside renders the wheat more hardy and its color brighter, and when sowed on level land, or southern hillsides, it stands the winter better and ripens six or eight days sooner; consequently it is more likely to escape the mildew and scab, which are known principally to attack late ripening grain, and every year destroy millions of bushels.

In order to prevent smut, after selecting my wheat for seed as above mentioned, letting it get thoroughly ripe before I cut it, I put it up in round shocks, capped with two sheaves butt end up, to secure it from the weather. After threshing it I put it in my granary, sprinkling slack lime over it at the rate of one peck to ten bushels of wheat. This prevents the wheat from getting into a sweat or heating. It also is an effectual preventive of the attacks of the weevil, applied in this way or sprinkled over every layer of sheaves in the stacks or mows. When I am ready to seed my land, I prepare my wheat by steeping it in a strong brine of salt and water, that will float an egg, and add to this two pounds of saltpetre and a half pound of blue vitriol (sulphate of copper) to every ten bushels of wheat. After taking it out of the brine I roll it in lime before sowing. The above articles are very cheap, and are in my opinion a certain antidote to smut, and improve wheat in quantity and quality at least ten per cent. The crop from seed thus prepared ripens eight or ten days sooner than wheat sown without any preparation, and consequently is less liable to mildew or scab.

H. R. SMELTZER.

SELECTIONS OF PEARS.—The Western Farmer and Gardener, recommends to those who have room for only four pear trees to select the Bloodgood, Bartlett, Duchesse d'Angouleme, and Beurre d'Aremberg. For those who have room for eight, he adds the Seckel, Passe Colmar, Columbia, and Winter Nelis; for those who have room for sixteen, he adds the Madeleine, Summer Franc-Real, Dunmore, Beurre Bosc, Dix, Beurre Diel, Beurre Rance, and Easter Beurre.

Of cherries he recommends for a collection of two trees, the May Duke and Black Tartarean; for four trees, he adds the Bigarreau and Downer Red.

Of plums, for two trees, he recommends the Green Gage and Coe's Golden Drop; for four trees, he adds Jefferson and Washington.

For the Duchesse d'Augouleme we should substitute the Flemish Beauty, for the Passe Colmar the Louise Bonne de Jersey, and for the "Beurre Rance, and Easter Beurre," the Surpasse Virginie, Henry IV., and Lawrence.—*Mass. Spy.*

Forcing Fruit Trees to Bear.

Young trees and slow bearers may be made to produce fruit by tying down the limbs in July below a horizontal position. The circulation being retarded, will cause a less growth of wood, and the formation of fruit buds,

Rust in Wheat.

The extraordinary thriftiness of the wheat crop, will be like to expose it to rust, should there be weather favorable for its production, shortly before the grain ripens. In this event, we are aware of but two measures which can be made use of to save the crop. One is, to cut the wheat as soon as the rust has struck it badly. If the berry is then so far advanced as to be between the milky and doughy stage, it will yet fill out so that but little loss will be sustained, while the flour made from it, will be of the finest quality. The other method has never, so far as we are aware, been tried in this country, but is said to have been made use of in England with complete success. The following experiment on this point, made by an English Clergyman, is published in the *Farmer's Encyclopedia*.

"It gives me great pleasure to have it in my power to furnish you with some information respecting the application of salt, which, perhaps, you are not aware of. I, and a neighbor of mine, have applied it as a remedy for the mildew in wheat, with the most unequivocal success. I first made the discovery 2 years ago; my experiments at that time were upon a very limited scale; they have this year extended only over an acre and a half, but under circumstances that leave not a shadow of doubt of salt being an absolute specific for mildew, in the most aggravated stages of the disorder; of this I will state to you a convincing proof.—In the year 1818 I found a few ears of wheat, which I conceived to be a new and improved variety; from these ears I raised as much wheat as last year planted a land 4 feet wide and 100 yards in length; the produce I had promised to Mr. Coke; and, to augment that produce, I had the ground, previously to planting, highly manured; and as soon as the wheat came up I gave it a good dressing with soot, and this dressing was repeated once or twice; in consequence of this superabundant dressing, the wheat, as might indeed have been expected, was as rank as the wheat you may observe growing accidentally upon a dunghill, which never fails to rot upon the ground, without bringing a single grain to maturity. The mildew made its appearance on this particular part of my field, while the straw was quite green, and the grain in a milky state; notwithstanding the danger that might be apprehended to the wheat itself, from its being thus succulent, I ventured to give it a dressing with salt and water; as a heavy shower of rain fell a few hours afterwards, the dressing was repeated the next morning. The proportion of salt to the water, 1 pound in a gallon, laid on with a plasterer's brush, the operator bearing a pail of the mixture in one hand, and the brush in the other, making his casts as when

sowing grain, or else with a common watering-pot, which, being swung with great force, throws the water very rapidly; 2 men will get over about 4 acres a day—the one to spread, the other to supply the mixture. The result was, that the mildew was completely subdued, and the wheat went forward to maturity; and although the sample was not so bold as it might have been, it was sound and marketable. In other parts of the field where the mildew showed itself, not under the aggravated circumstances described above, but as it usually appears, the wheat was not in the least injured by it after the salt and water was applied; it was, indeed, as fine a sample as could be grown. Both mine and my neighbor's wheat was examined by many practical farmers, who are so decidedly convinced of the efficacy of my remedy, that they intend never to be without a reserve of salt ready to meet the enemy the moment he appears. The effect of the salt upon the mildew, to those who do not consider the manner of its operation, is truly astonishing; I believe it to be *instant death to the fungus*; this, however, is certain, in less than 48 hours the straw nearly recovers its original color and brightness. The certainty and celerity of its operation I account for thus: the mildew, it is now well ascertained, is a parasitical plant of the fungus tribe, the principal constituent of which tribe is water;—when salt, therefore, is applied to them, the aqueous particles are immediately absorbed, and their vitality destroyed. The action of salt upon mushrooms, as in making mushroom catsup, confirms this theory."

The Compiler adds: "I can afford decided testimony to the efficacy of the cure recommended by Mr. Cartwright; but I would add these precautions. The safest quantity of salt per gallon is 8 oz., and then the application may be rendered more effectual by frequent repetition, without any danger of injury to the plants. If the application is not made during a clouded day, it is best to defer it until the evening."

There would, at all events, be no waste in the experiment, as the salt would be valuable as a fertilizer of the soil for subsequent crops.

Clearing of Timber Lands.

FRIEND HURLBUT:—As I have not been "through the mill," perhaps it is not meet for me to respond to the enquiry in your last, on the above subject; yet as I am in "the mill," and have been for three or four years, having got somewhat rubbed, and learned a little to dodge the hard knocks that I received "in getting the hang of the barn," perhaps it would not be improper, after all, to make a few remarks as to the best method of clearing the land; that is, if a Timberlander can so ex-

press himself as to be intelligible.

Mr. Ellsworth states in his report (as Commissioner of Patents) that the ashes if worked into pots and pearls, will nearly or quite pay the expense of clearing the land. This remark has led me, and I presume many others into an error in our estimates. The truth is, the ashes are worthless, so far as manufacturing, or selling them to the manufacturer is concerned. The price given will not pay the labor of gathering and marketing. As to boiling them, it is generally done without proper conveniences, and does not pay for the time spent, and I believe from observation and experience is at the present prices a serious drawback on ninety-nine hundredths of those farmers engaged in their manufacture.

As to the value of the ashes when used as a fertilizer I have a better opinion.

I have cleared land in each of the following ways; cutting the timber about 20ft in length and piling the brush in round piles at a cost of \$10.31 per acre.

Also cutting the timber as above, throwing the brush in winrows and jam-piles at a cost of \$9.00 per acre.

One and a half acres chopped in December, the logs rolled and burned as chopped, and the brush thrown in round piles, and burned in March, cost \$17.00 per acre.

The labor in the above cases was reckoned at five shillings per day. If the land is wanted immediately, as is generally the case with new settlers, it should be chopped in winrows, the timber cut up for logging, and the brush cut fine, and fired the first favorable time.—

In case of necessity, the logs may be rolled up between or against the winrows; crops have been raised in this way before clearing, where necessity seemed to demand it.

If the land is not wanted immediately, throw the timber into windrows in the month of June, July and August, to be left as it falls without chopping and trimming. Leave the rail timber standing. The windrows should be so arranged as to form a fence around the piece. Throw grass and clover seed on the ground that is not covered with the rows, this will keep down the weeds and make good feed for your stock. In from three to five years, as the seasons may be, or as you may wish to make haste, and when there is a prospect for a "good burn," cut your fencing timber that the tops may burn with the rest, and fire the rows. The fire does most of the chopping, the logs being seasoned, will roll easy, and but few will be needed in a heap to make them burn. In this way, clearing will be done for about five dollars per acre, minus the use of it for pasture from three to five years.

Girdling, as spoken of in your May number of the Farmer, I consider from observa-

tion to be a slovenly as well as expensive way of clearing.

Slovenly, because what timber falls does not fall where it is wanted; it is generally better to have a tree standing than to have it fallen in a wrong place, though but little or no more timber will fall than would have done if left in a state of nature; the underbrush and weeds will, of course, grow among the dead timber "without let or hindrance"—Expensive, because the timber will be hard to fall, the limbs or clubs will have to be picked up as they will not burn in windrows for want of either foliage or twigs, the green roots of the underbrush will be a draw-back upon the first crop, and no use of the land for the five years that the girdlings stand.

If the foregoing will be the means of drawing out the experience and opinions of other on the subject I shall be glad.

Excuse the length of this epistle, and do as you please with it. I will endeavor to be more brief in future. Yours truly in the cause,

A. M. C.

Variety Grove, 15th of 5th month 1846.

ITALIAN RYE-GRASS.—I am quite satisfied of its being the most valuable plant I know of, especially for early spring feed; it comes to perfection for feed quite as early as rye, and the comparison between the two for feeding qualities, is as 10 to 1 in favor of the Italian rye-grass.—*Jour. of Eng. Ag. Soc.*

[Has this grass been introduced into this country? and with what success?]—N. E. Farmer.

BEAN SOUP.—Take one quart of white beans, and put them to soak over night; in the morning drain off the water, and put them into an iron vessel, with four quarts of clear soft water; place them over the fire, and keep boiling gently for three hours, or till about half past ten o'clock; then add one pound of pickle pork, cut in thin slices, and keep boiling till noon, when they will be sufficiently cooked.

Where the family is small, half the quantity may be used; and if the quantity of beans is increased, the other ingredients should be added in the same ratio. Pepper, &c. may be introduced when served up, to suit the taste.—*Far. and Gard.*

MUTTON.—We mean to repeat at least a thousand times, or till what we say has some effect upon our countrymen, that a pound of lean, tender, juicy mutton can be raised for half the cost of the same quantity of fat pork; that it is infinitely healthier food, especially in the summer season; is more agreeable to the palate when one gets accustomed to it; and that those who eat it become more muscular, and can do more work with greater ease to themselves than those who eat fat pork. We know nothing more delicate than smoked mutton hams of Southdown breed of sheep—venison itself is not superior.—*American Agriculturist.*

[Extracts from Morrell's American Shepherd.]

PASTURE FOR SHEEP.

It will have been seen, that the short and yet nutritious herbage of uplands is best adapted to the Merino and Saxon varieties, as being most conservative of those peculiar properties of their wool which adaptates it to the manufacture of the finest and softest fabrics; but on the other hand, if these breeds are removed to rich pastures, these valuable qualities of the fleece become in a measure deteriorated. This is unquestionably true if the removal is permanent, but will prove in no wise injurious if a change is made from upland to valley herbage at short and frequent intervals. Indeed, this is highly proper, as that variety of food, so conducive to the health and thirst of the animal, is thereby afforded.

From old or natural to the cultivated grasses, alternately once a week or fortnight, the flock-master will learn, from observation, suits well the inclinations of sheep. In keeping with this, they should be allowed occasionally the range of open wood-lands, to brouse upon forest shoots, the slight acidity of which is much to their liking.

A further argument in favor of frequent change of pasture, is the fact that if sheep are confined too long on one enclosure, no matter how good the feed may be, it becomes tainted by their constant wanderings over it; and hence, from their nice habits and extraordinary keenness of smell, will neglect it. When the flock is seen nosing here and there without eating contentedly, lose no time in removing them, even if the pasture to which they are taken is shorter and less abundant. It will be fresh and untainted, which is always reason enough for the change.

It is always of paramount importance to adapt the breed to the quantity of feed the particular locality on which they are placed is capable of furnishing. But, in this and other States, this consideration hitherto, in very many instances, has been lost sight of. The American farmer hears of the amazing size, weight of carcase and fleece of some of the English breeds, and makes undue haste to purchase, in some instances without previously knowing whether their wool is suitable for felting or combing purposes, and without duly considering the fact that the relative quantity of food sheep consume is in the ratio of their size. The herbage of his farm is of the upland character, or their situation is too much exposed to cold, or, on the principle that a "sheep is a sheep," he stints them to the quantity of feed which is capable of supporting a similar number of the smaller breeds; and from one or more of these causes, his expectations are disappointed, and he abandons them with execrations. This has arisen from placing them on too low keep—the locality was not adapted to them, because the soil was not capable of furnishing that rich and abundant herbage requisite to support and fatten such large animals. He was not aware that the profits of the English breeds must be looked to from the carcase and not so much from the fleece; and therefore, to bring around quick and remunerating returns, that they required large and continuous supplies of succulent food from the start. One of the grand improvements effected in the English mutton sheep, is an earlier maturity, in

order that they may be cleared off to the butcher in the shortest time; but to accomplish this the English breeder takes special care not to place the famed Leicester, Cotswold, or Lincoln breeds on the stinted feed of mountain sides, but in such situations where ample provision is found for full feed and quick fattening. In such localities as are near to a market where fine fatted mutton is appreciated and paid for accordingly, the heavy British breeds will be found profitable; under other circumstances, the Merino, Saxon, and grades of these varieties will bring the largest returns of profit to the American sheep culturist.

Connected with the general observations of the present chapter, is the consideration of the various *grasses*, with the amount of nutriment they respectively afford. The following summary was compiled by Mr. Youatt from Sir Humphrey Davy's distinguished work on Agricultural Chemistry. Their times of flowering differ not essentially in this country and England, and in this order they will be mentioned.

ROUGH-STALKED MEADOW GRASS (*Poa trivialis*). In rich, moist soils, and sheltered situations, it is a highly valuable grass; but on high and exposed ground its produce is inconsiderable. It flowers about the middle of June, and seed ripens July 10. It is highly nutritive, and sheep are exceedingly fond of it. The nutritive matter is, at seed time, 5½ drachms to the pound. Its superior value when fully ripe, is very striking, and should not be forgotten.

SHEEP'S FESCUE (*Festuca ovina*). Flowers about June 25, and the seeds ripen about July 10. The produce is comparatively small, and the proportion of nutriment is not more than 3 drachms to the pound; but sheep are exceedingly fond of it. Linnæus affirms that sheep have no relish for hills and heaths that are destitute of this grass. Sheep are so fond of it, they thrive wherever it is found.

COCK'S FOOT, OR ORCHARD GRASS (*Dactylis glomerata*). This is an exceedingly productive and nutritive grass; affording in the flowering time 5, and when the seeds are ripe, 7 drachms to the pound of nutritive matter. The leaves of the aftermath are very succulent. It is valuable for permanent pasture, and sheep eat it very readily.

WELSH FESCUE (*Festuca Cambria*). The sheep are as fond of it as of the common sheep's fescue, while it is more productive and succulent. It is most valuable when the seeds are ripe.

RYE GRASS (*Lolium perenne*). Mr. Sinclair says of this grass: "Sheep eat it when it is in the earliest stage of its growth, in preference to most others; but after the seed approaches towards perfection, they leave it for almost any other kind. A field in the park at Woburn was laid down in two equal parts, one part with rye grass and white clover, and the other part with cock's foot and red clover. From the spring until midsummer the sheep kept almost constantly on the rye grass, but after that they left it and adhered with equal constancy to the cock's foot during the remainder of the season." This grass is of almost equal value at the flowering and seed season—the latter at the end of July. It may, however, be objected to, as it exhausts the soil.

SHADE TREES.
For the purposes of adornment and utility,

shade trees are not sufficiently appreciated by the American husbandman. To sheep, particularly just after shearing, they are peculiarly grateful; and, during the warm season, are indispensably necessary to promote thrift, inasmuch as they contribute to greater quietness. If the axe has been ruthlessly laid to the roots of those which have been natural tenants of the farm, their places should be supplied by others. The common maple, linden, and sycamore will be found valuable for this purpose. A few of the second shoots of forest clearings, which grow with great rapidity, and consequently, in a few years, afford an abundant shade, should be left, and the most thrifty ones selected for this purpose. If the flock-master is careful in his observations, he will learn that sheep which have had the benefit of woods to retire to during the heat of the day, will be in better condition in the fall, than others deprived of such grateful retreats.

WATER.

Water is not deemed so absolutely necessary for sheep as other domestic animals, since their instincts lead them to graze early in the morning, before the dew evaporates, and again for a while in the evening, when the temperature of the season is warmest. In the hot month of August, however, when the feed is less succulent, they appear eager for it, and should be gratified, if possible. But the lambs, when suckling, will do better if the mothers have access to it at all times. Therefore, since every pasture is not supplied with water, the master should appropriate those which contain it to his breed ewes. It should be considered, that the milk secretions cannot be so abundant if the ewe suffers too much from thirst, nor in any wise do as well.

KINDNESS BETTER THAN FORCE.—If you want your horse to work well, you must endeavor to make it happy; happiness increases its strength and energies, and unhappiness diminishes them. When you find it is weak in any particular point, do not press and-harrass the weakness, but show it indulgence. Do not urge it to do more than it is well able, as the more it is compelled to do today the less it will do to-morrow. When you find your horse begins to slacken his speed, do not recklessly compel him to maintain it, but think how *you* yourself would like to be thus urged on beyond your strength. Do not worry your horse by repeated whip strokes; as every blow robs the animal of some of his strength, and continual blows rob it also of the motives to exertion by the violence of the strokes on the skin, and also affect the muscles underneath on which the motions depend. If any person doubts this, a slight blow on his arm or leg will soon convince him of the truth. If you have two horses working together, and one horse is slower or weaker than the other, do not force it to do as much as the other, but rather slacken the speed, if even it is done by keeping the other horse back; and never use bearing reins; they are useless to the driver, vexatious to the horse, and are the cause of many falls; but above all, be not too fond of showing them that you are their master, and they your slaves; they know it well enough to their sorrow and without this trouble.—*Ex. Paper.*

Oat Fodder for Horses.

At a discussion had at a meeting of the Darlington (Eng.) Farmers' Club, Dec. 8th, on the best and cheapest mode of keeping draught horses during winter, Mr. Trotter said:

"I have paid some attention to the subject of keeping of draught horses during winter; for the last three years I have adopted quite a different mode to what I previously followed. My method formerly, was to allow my draught horses each 2 bushels of oats per week, together with 1 bushel of beans and as much hay as they could eat, generally clover hay. For the last three winters I have fed them almost entirely on cut oat-sheaf—cut into half-inch chaff—which has been a very great saving to me.

In an oat crop of about 40 stocks per acre, which might yield near 60 bushels, the feed of a draught horse averages 2 sheaves per day, or 14 sheaves per week, which would be about a bushel and 3 pecks per week, if they had been thrashed out, which is a saving of a peck of oats per week, each horse, from what I formerly gave them; besides, I save the bushel of beans per week, and the clover hay, which was a very considerable item. When I first changed my mode of feeding, the horses improved in condition wonderfully, thus showing that it suits them well. When they are very hard worked, I allow them half a peck of oats at dinner time besides the cut sheaf.

Last winter I had only 18 acres of oats; those kept 12 draft horses, besides four young ones occasionally. This quantity of oats would not have served me through the year, had I not pursued this system of feeding."—*Lon. Ag. Gaz.*

BREAD STUFFS.—It is altogether unexampled that such immense shipments of bread stuffs should have been made from this country during the last six months, and yet the price affected so slightly at home. We know not how to account for it except on the confidence which the dealers and growers have in the capacity of the country to increase its supply from the next crop, for the stocks are much lower than usual at this season of the year, and the demand much greater, though the price is low. From New York alone for the last six months, there has been exported to foreign countries, 460,101 bbls. Flour; 380,432 bu. Wheat; 54,614 bu. Corn; 175,140 bu. Rye; 99,324 bu. Barley, and 17,263 tierces Rice. Besides this, great quantities have been shipped from New Orleans, Baltimore, Richmond, Philadelphia, Alexandria, and even from Boston, 850,000 bbls. Flour have been shipped.—*Newburyport Herald.*

POTATOES.—I am happy to state that all which were packed in charred sawdust, charred old tan, as well as those packed in dry turf-ashes, are as sound and free from disease as could be wished. They are dry, mealy, and fine-flavored, but those that were pitted or banked in the usual way have rotted wholesale, and the effluvia arising from them is very unpleasant.—*Cor. Gardner's Chron.*

ALL the rats and other vermin caught on the farm of the Rev. A. Huxtable, are thrown into sulphuric acid, by which they are soon converted into manure as valuable as bone dust.

For the Michigan Farmer.

Currant Bushes.

Mr. EDITOR—Having noticed that currant bushes may as well be made trees as shrubs, I conclude to tell you how I have seen it done.

In the spring of 1831, my father commenced a garden in Lyon, Oakland Co., and among other things, set cuttings for "currant brush." I determined to make an experiment on one of these cuttings, and as soon as it grew I pinched off all the leaves except the top tuft, which I left to grow. The cutting was about 14 inches long, and during the summer, the sprout from the top of this grew perhaps 10 inches. The next spring I pinched off all the leaves to about half way up the first year's growth, so as to leave the lowest limbs about two feet from the ground. It branched well, and became a handsome little dwarf tree.—When it came to bear fruit it was more productive than any other in the garden, and the fruit both larger and cleaner. It was less infested with spiders and other insects, hens could not peck off the fruit, grass and weeds were more easily kept from about the roots, and it was an ornament instead of a blemish.

Now, sir, I would propose that currant cuttings should be set in regular rows, about 4½ or 5 feet apart each way, (let them be long and straight ones,) and trained up as above, into trees. This will make a handsome currant orchard, between the rows of which, potatoes, beans, pumpkins, &c., may be grown almost as well as if the trees were not there. The currants would be pleasanter, larger, and more abundant, and the garden cleaner, handsomer, and more profitable.

N. H.

April 30th 1846.

For the Michigan Farmer.

How to Winter Bees.

As soon as cold weather sets in in the fall, select some high plat of ground, (in order that it may keep dry,) make a hole deep enough to receive about $\frac{1}{2}$ of the length of the hive, and large enough so that there can be stone put around it; put a board in the bottom a little raised, say two inches; set the hive on the board, cover the whole with straw, and then with earth, about three inches deep, in the form of a cone. Take them out in the spring as soon as the forest trees begins to blossom. I have practiced this plan for six years with success, sometimes only burying the late light swarms.

H. H. H.
Milton, Cass Co. Mich.

TO DESTROY THE BEE MILLER.—To a pint of water, sweetened with honey or sugar, add half a gill of vinegar, and set it in an open vessel on the top or by the side of the hive. When the miller comes in the night, he will fly into the mixture and be drowned.

For the Michigan Farmer.

Insects in a Nursery.

H. HUALBUTT—I am desirous of making an inquiry which I trust, may through the medium of your paper, be answered as soon as possible. I observed 2 years ago in a certain part of my nursery a few trees (apples) that presented the appearance of being diseased from an entire suspension of the growth; and several I observed were literally dead.—But imputing its origin to some local cause that would never perhaps affect them in like manner again, I neglected a timely investigation until this spring, when to my astonishment I found the disease raging more malignantly than before, and, unless counteracted, it would inevitably destroy a large portion of my nursery. On dissecting the tree, I discovered worms almost imperceptible from their diminutive size, varying in length from an eighth to a sixteenth of an inch, proportionate to their age, and of a brown color. All my experience in the nursery business, which may be confined within the lapse of 10 years, can suggest no expedient that may effectually arrest their progress, and if you or any correspondent can throw any light on the subject by proposing a method that will exterminate them with the greatest despatch, an inestimable favor will be conferred on the

YOUNG NURSERYMAN.

Raisin Mich.

REMARKS.—Our Correspondent is not definite enough. He does not say whether the worms are in the root, trunk or branches, or in all; whether they had penetrated the wood, or the bark only. So far as the description goes, it seems probable the disease is what is called *the insect blight*. This affects chiefly the branches of the apple and pear, and is caused by a minute worm, about one-tenth of an inch long, which penetrates the wood, making circular grooves around the centre, and, in a measure, cutting off communication above and below by severing the sap vessels. As early as July or August, it issues forth in the form of a small beetle, and deposits its eggs for another destructive brood the next season. The only remedy we find is one contained in Downing, which consists "*at the very first indications of the existence of the enemy, in cutting off and burning the diseased branch, a foot below the lowest mark of discoloration.*" The further propagation of the insect is thus prevented.

If the insect in our correspondents' nursery appears not to be identical with the above mentioned, we will, if furnished with a more particular description, communicate by letter all the information in our power.

Ep.

FOR BURNS AND SCALDS.—Clarified honey applied on a linen rag, or a raw potato scraped.

Corn for Fodder--Inquiry.

I sowed some two acres of corn the last year with the design of soiling my milch cows during the dry weather, and short feed of the latter part of summer. But the drouth cutting off the hay crops, I was compelled to keep the corn for winter fodder. It was sowed on sward land, turned neatly over and well harrowed. The yield was heavy, (notwithstanding the drouth,) full seven tons of cured fodder to the acre. My cattle prefer it to any other food I have. They will leave pumpkins, potatoes, sugar beets, &c., to eat the corn stalks when both are in the mangers.—The saccharine matter is abundant, and if I had enough I should not regret the loss of my hay, nor fear for the cattle, this severe winter. I cut it when in the tassel, and when the more scattering stalks began to silk. It cost me about four days labor with two yoke of oxen to prepare the ground and sow the seed, and full six days labor to harvest an acre. And hence comes, my inquiry. Is there any easier or cheaper way to harvest it than to reap the stalks, bind in a small bundle, and stack them up to cure. This was the way I did; but it was very hard work, and took a long time. To cradle it was impossible; and I had no so hard work on my farm as the reaping and stacking an acre in six days. Has any one found a better way? if so, what is it? The stack (eight bundles) I let stand full six weeks before putting the corn in the barn; and now it is in fine order. It takes corn fodder a long time to cure. H.

—Cultivator.

Value of Cob Meal.

MR. EDITOR—It has been the opinion of most farmers, that corn cobs were of little or no value, and they have generally thrown them aside as of no use except for manure.—The experience of some who have formerly fed corn and meal, and the anticipated scarcity of hay has led nearly all of our corn growers to turn their cobs into food for their stock. To show something of the extent to which it has been used here, the following will give you some data to judge from. One mill in this town has, within the last three months, ground more than 5000 bushels of cobs, besides a large quantity of corn in the ear.—This fact, I think, proves quite conclusively that cob-meal is valuable as an article of food for stock. Indeed the opinion which is expressed by those who have used it, is altogether in its favor. When they get out their corn, it is not threshed entirely clean; some 3 to 15 bushels of corn is left on the cobs. They are kept clean as possible till ground into meal. Cattle, horses, sheep and hogs, eat it readily, without adding other grain. When fed to

cattle in addition to hay, a marked difference in their condition and appearance is seen, from those fed on hay without the meal. Some feeders mix it with other grain, roots, &c., with marked profit and success. When fed with oil-cake, it is found to answer an excellent purpose, as it takes up all oil without waste.

G. W. B.

—Cultivator.

The Objects of Farming.

The main objects of farming are, or should be, two fold, viz:

1. The greatest net profit, with reference, however,
2. To the improvement, or at least to the preservation of the fertility of the soil.

He that wears out his land by parsimonious stinting of manure, and labor, and close cropping, with a view to *present gain*, may be compared to the intemperate man who parts with his last cow that fed his family, to gratify his intemperate indulgences. While good land always pays a liberal reward to labor, poor land often beggars its proprietor. The fault is often admitted, that our farmers cultivate too much land to cultivate it well; that they are too parsimonious of their expenditure to put and keep it in good order; and that they rely more upon propitious seasons, good luck, and the special bounties of Providence, for good crops, than they do upon good management; upon the capital and labor employed in the improvement of their grounds. There is no sounder maxim for the guidance of the farmer, than that which teaches — “what you do, do well.”

Buel.

Bone Dust.

A correspondent with the signature of “Rambler,” furnishes us with an account of an experiment made by ANDREW COE, of Middletown, Ct., with bone dust in raising turnips. The soil on which the trial was made, is represented as being thin and worn out. Twenty bushels of bone dust was applied to the acre, and the turnips sown about the first of August. The crop was luxuriant, and is attributed wholly to the bone dust. The writer states that he measured a piece in the lot six feet square, and by computation found the product to be at the rate of 1210 bushels per acre. The field, however, he says, would not have averaged that, but would have averaged half the quantity — say 605 bushels per acre. A space left through the middle of the lot, a rod and a half wide, without any bone or any other application, produced nothing worth harvesting.—Cultivator.

FELONS.—A plaster made of soft soap and the strongest lime that can be had, in equal parts, is said to be a sure remedy.

Rolling Fleeces.

After the shearer has performed his task, the fleeces must be carefully taken from the floor, and put upon the rolling table, the outside of it uppermost. The valuable loose locks about the shearer's stand must all be picked up, and the useless stuff from the legs, &c., put into a corner, bag, or basket. It should not be swept out of doors, as it possesses valuable properties for manure.

The roller then proceeds to spread out the fleece, which cannot be too carefully done, separates the ragged portions from the skirts and head, and makes it as compact as possible by pushing from all sides towards the centre. The loose wool is then thrown upon the fleece, which is followed by turning over the sides and ends so as to form an oblong stripe, say about two or three feet long, and one and a half wide, which is moved to the front edge of the table. He then commences to roll the long side of the stripe, aided by a boy at the other end of it, who lay their arms flat from the elbow to press the wool as the rolling proceeds, till the stripe is reduced to six or nine inches in width, depending on the size of the fleece. The boy then mounts upon the table, and each commences rolling from the ends of the stripe till the parts meet, when the boy rolls his portion on top of his assistant's, firmly pressing it till the twine is passed round both ways and tied, which effectually secures the fleece, no matter how roughly handled. After it receives a slight pressure, it presents somewhat the form of a cheese.

There are other modes of putting up fleeces, performed without any aid; but the writer has yet to see that individual who alone can roll a fleece as firm and solid as it should be, at the same time giving it a symmetrical and attractive form. If it is loosely rolled, the quantity of canvass used for packing is necessarily much increased; and this item of extra expense is more than equivalent to the services of a lad as an assistant.

BUDGING FRUIT TREES.—JOSHUA H. ORDWAY, who received the first premium of the Essex Co. Ag. Society for the management of fruit trees, says: "I practice shield or T budding, and put the bud on the south-west side of the tree, the rows running south-east; they are then not exposed to the sleet and snow of winter. I formerly lost many buds by inserting them on the 'back' side of the tree. Another advantage of putting the bud on the south, is the greater portion and quicker flow of the sap on that side, as every one knows that a bud takes best where there is the most sun and sap. I learned some twenty years ago, to take out the wood from the bud, but soon gave up the practice, and should now as soon think

of taking out the pith of a scion. In regard to transplanting fruit-trees, Mr. O. says he has had much the best success when removing them early in the spring. "Young trees set in the fall," he observes, "are liable to be thrown out by frost. And all, whether large or small, often suffer injury by having their roots severely frozen when the ground is bare during our severe winters."—*Cultivator.*

STEINKROUT OR TARE—Sometimes called Pigeon weed and Red Root has nearly ruined some of the best wheat growing portions of the State of New York. Perhaps it is not generally known that it spreading in this [Washtenaw] county, but such is the fact.—We noticed a field the other day in front of the Rev. G. Beckley's near the lower village, some portion of which must be nearly ruined this season. In Pittsfield we understand it is spreading very fast; some farms are very much injured already and will soon be spoiled for growing wheat. We make these suggestions for the purpose of calling the attention of farmers to the subject, having seen the evil effect it has produced at the east.

The most successful method to eradicate it when it has spread, and perhaps the only one, is said to be, to plow and harrow the field in the fall, and in the spring after the tare has come up plow again; that which was buried deep may start again and require a third plowing. When there is but little in a field it may be pulled out very early in the spring while it may be seen above the wheat. Those unacquainted with it will find it a bushy plant with a very red root.

Farmers who have seen the immense damage done by the Tare urge us most earnestly not to allow it to gain a footing in this state, but to plow up every field of wheat where it is found to any extent.—*Ann Arbor Jour.*

Painter's Cholic.

The disease called *painter's cholic* is unknown in all manufactures of which the workmen are accustomed to take as a preservative sulphuric acid lemonade, (a solution of sugar rendered acid by sulphuric acid.)

All compounds of lead with organic matters are capable of decomposition by dilute sulphuric acid.—*Liebig.*

To PREVENT DEPREDACTIONS BY HAWKS.—One or more guinea-hens in a flock of fowls it is said will effectually prevent molestation from hawks.

To MAKE HARD WATER SOFT—add to 1 bucket of water, warmed, one ounce of carbonate of soda, which renders it soft as rain water.

Cure for Bots.

MESSRS EDITORS:—I see in the Farmer and Gardener, March 16, No. 6, page 90, that a horse farrier knows a certain cure for bots in horses; please tell him of one other cure as certain as his, that he can keep. In the year 1804, I raised a large crop of barley, and barns were a scarce article among us, and I had to stack it out. I had a horse that was troubled with the bots; he got to the stack and ate what he wanted. The next evening I saw hundreds of bots that came from him; the barley arms cleared them out entirely.—I have often tried it since, and never knew it fail. Give a horse a few sheaves of barley, and I will insure that it will take every bot out of him.—*West. Farm. & Gard.*

BUCKWHEAT.—Buckwheat is a native of Northern Asia, and seems to have been introduced into our country at its first settlement. It stands lowest among the grain crops of the farmer, and is seldom included in any regular rotation, but is cultivated on some piece of new land, or some field out of its regular order.

Mr. Ellsworth's Report for 1844, makes the whole crop grown in the United States, 9,000,000 bushels. More than two thirds of this is grown in the States of New York and Pennsylvania. Among the New England States, Connecticut takes the lead, while Ohio is most engaged in its cultivation in the valley of the West.

Among some farmers its cultivation is induced by the little comparative outlay of seed and labor, and the quickness of the returns.

By some it has been considered a very exhausting crop; but this is by no means the generally received opinion. It is more easily affected by the weather than any other grain, and a dry season, a hot sun upon the blossoms, or an early frost, is sufficient to seal its ruin; but if the season is propitious, good crops are often grown on very poor land.

It is generally sown about the first of July, and about half a bushel of seed to the acre is required. The better the ground the less seed is wanted; the most successful cultivators considering it an object to have a rather thin stand, large straw, and well branched out, in order to have a good yield. Rye is sometimes sown with it, and a tolerable yield is obtained when the season favors. Thus two crops are obtained with the same plowing.—*Am. Ag.*

"RYE AND INDIAN" BREAD.—Take six qts. of sifted Indian meal—scald it up with boiling water—when sufficiently cold, say the temperature of new milk, mix two qts. of rye meal, one gill of yeast—stir the whole well together—put it in a warm place to rise. When it is riz, take it out with a spoon into small pans for bak-

ing. Be sure the oven wood is ready, so that it may be baked before it is sour.—*Prairie Farmer.*

From the *Farmer and Mechanic*.

Charcoal for Wheat and Rye.

GENTLEMEN: In fulfillment of my promise, I communicate the following statement of some of the results of my inquiries in relation to the beneficial effects of charcoal as a fertilizer, and as a preventive of shrinkage in winter grain.

Mr. Holloway, of Hancock, Delaware county, informed me that he had heard his father remark that he had never known land to wear out where there had been a coal pit; but that such places always produced better than the adjoining land. It may be well to remark here, that in some instances I have been told that the burning of a coal-pit had for a while destroyed the fertility on the immediate site of the pit. But this may be owing to excessive burning of the soil, or too great quantity of the coal. We would not expect a crop from seed sown in a heap of lime or silica. Almost all of whom I have inquired confirm the account of Holloway as to its uses as a fertilizer, and its durability. I will state but one of a number of facts proving its benefit in increasing vegetation, besides the luxuriant growth on the sites of coal-pits.

An aged and credible man, Mr. Dow, of Chehocton, in Delaware county, said that some years ago, when living at a place called Butternuts, he purchased a load of charcoal to use in a small furnace. The man who brought it, in passing through a piece of ground, occupied as a garden, upset his load. They gathered up all they could, but much fine coal was left. Mr. Dow and his wife both said that it was astonishing to see the increased vegetation to the extent of where the coal was left.—They say it was a moist soil.

These, and a number of facts, the result of much inquiry on the subject, have convinced me that coal can be profitably used as a fertilizer. But it is peculiarly valuable as a preventive of rust and shrinkage in wheat and rye. In proof of which, Colonel Holliday, of Colchester, Delaware county, a reputable man, well esteemed for truth, who was himself a blacksmith, and whose father had followed the same trade, and had burnt many coal-pits, told me that he had made the remark to his father that he had never known grain to be shrunk where there had been a coal-pit. Last year, my son-in-law, Henry Woolsey, of Deerpark, in Orange county, said he had a piece of rye much shrunk, and of little value except where there had been a coal-pit, where it was plump and fair. Many other facts have come to my knowledge confirming my opinion that charcoal may be used so as

to greatly increase the profits of farming, and particularly where wood is abundant. But as there has, as yet, been little experience on the subject, I would suggest that every farmer who reads this should try the experiment, at least in a small way. Almost any one can procure a little, (if only a bushel;) try it in different proportions; observe the nature of the soil; and, if possible, compare the effect of coal from different kinds of wood—if those containing more potash are better; and if so, what soils, &c. Some (as the coal from hemlock) contain little or no ash; if such are beneficial, it proves pure carbon to be indeed a manure.

Respectfully yours,

HENRY V. KLEET.

Analysis of the Mineral Elements in Wheat.

The following analysis of the ash of wheat is given by Dr. WILL, a gentleman that possesses a high European reputation as an analyst. We have confidence in its correctness.

100 parts contain

Potash from Soda Lime Magnesia Peroxide of iron Phosphoric acid	22 to 34 parts, 16 " 2 to 3 " 9 to 13 " 1 " 49 "
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Dr. Will gives 2 per cent. more phosphoric acid than M. Boussingault. The latter found as the average of his analyses 47 per cent. of phosphoric acid in the ash of seed wheat.—*Gen. Far.*

(F) The object of the farmer in cultivating the soil is, to raise the largest crops at the smallest cost, and with the least injury to the land.—*Johnston.*

To PROTECT VINES FROM BUGS.—Mix equal parts of sulphur and soot together, and sprinkle on the upper and under surface of the leaves while the plants are wet.—*Ex. Paper.*

NEW STYLE OF FENCE.—Capt. Joseph Stevens, of Northumberland, has obtained a patent for a new kind of fence, which promises to be a great improvement. The posts are made of clay, burnt like brick. The Captain has been offered \$8000 for his invention.

CURE FOR DIARRHEA.—A certain cure for this complaint is found in rice water. Boil the rice, take the water, make it palatable with salt, and drink it copiously while warm. We never knew this to fail.—*Cult.*

ALBANY AGRICULTURAL WAREHOUSE & SEED STORE.

NO. 23 DEAN STREET, ALBANY, N. Y.

THE proprietors of the above establishment desire to call the attention of farmers and merchants in Michigan and other Western states, to their stock of seeds, comprising every variety from the best American and European growers, making an assortment equal to any in this country. Many of our seeds are imported, and all are warranted genuine.

The stock of implements is extensive, embracing the most recent improvements in every department. We keep the "Centaur Draft," "Worcester" and "Diamond" plows of all sizes, finished in the best manner.

"Lewis' Seed Planter," the most perfect one yet invented, is made and sold by us. It will plant at any required distance, Turnips, and all small seeds, Beet, Carrot, Tobacco, Cotton, Corn, Beans, Peas, and in short all kinds of seeds. Orders for any of the above articles in any quantity will be promptly filled, and shipments made as directed.

E COMSTOCK & CO.

Albany, May 12, 1846.

HUNT'S REVOLVING HORSE-RAKE.

HUNTING purchased the right of making the above Horse rake for Jackson County, with the exception of two towns, (Grass Lake and Hemettin,) him prepared to furnish rakes to order. They may be found at the store of Sumner & Bennett, in the village of Jackson, about the middle of June. All orders given on Sumner & Bennett, or the subscriber will be attended to.

WELEY W. LAVERTY.

Jackson, May 23, 1846.

WILLSON'S CORN CRUSHER AGAIN.

THE subscriber would hereby say to the public, that he is now prepared to furnish (on short notice,) those who wish with a portable mill, capable of grinding 30 bushels of ears of corn per hour, or grinding other coarse grain for feed, or shell corn, (with a rush,) rub out clover seed, &c., &c., called J. L. McKnight's patent Corn Crusher and Clover Rubber.

The subscriber is also prepared to sell Town or County rights on liberal terms.

The machine works like a charm, and is applicable to horse, steam, or water power. One horse is sufficient to perform the necessary grinding for any farm or other establishment for home consumption, but more power is necessary to do custom work at a profit. The subscriber has now in operation in his shop at his Temperance House in Jackson, a two horse power, by which, with the force of one horse only, (at present,) he drives his machine.

The advantage of feeding corn and cob in this manner are now too well understood to need rehearsal. Suffice it to say, that, at the South where they raise corn easily, where it is worth 10 cts per bushel, they think it an object to economize by grinding and feeding the cob, and that too, where they give from 1-4 to 1-3 for grinding either for feed or distillation.

One, two or three competent salesmen wanted, to sell rights to said machine in this state and Ohio, also to sell rights in this state of Thompson's morticing machine,—the best now in use.

J. T. WILLSON.

Jackson Feb 25th, 1846.

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MICHIGAN FARMER.

TERMS FOR VOL. IV.

During the ensuing year, all subscriptions will commence with the volume. The price of a single copy is fifty cents. To clubs, a reduction is made, namely, five copies for \$2, eight copies for \$3; and in this proportion for any larger number. No reduction allowed unless payment be made in advance.

To former subscribers, and to all others who may be vouch'd for by any resident agent, the paper will be sent on a credit till October next. To all demands remaining unpaid on the 1st of January next, an addition of 25 per cent. will be made.

ADVERTISEMENTS

Of agricultural implements, farms for sale, &c., would be inserted on our last page at \$1.75 per folio, for 3 months, or 75 cents for the first insertion, and 50 cents for each continuance. As the circulation of the Farmer is now probably greater than that of any other paper in the State, and as the number of advertisements is very limited, it is evidently a highly advantageous medium for advertising.